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P#12



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## RAW SEQUENCE LISTING

DATE: 04/03/2002 P.5

PATENT APPLICATION: US/09/647,309A

TIME: 11:11:01

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF3\04032002\I647309A.raw

3 <110> APPLICANT: Pierre Fabre Medicament  
 5 <120> TITLE OF INVENTION: USE OF ACTIVE P40 CONJUGATES FOR NASAL DELIVERY  
 7 <130> FILE REFERENCE: D17064  
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/647,309A  
 C--> 10 <141> CURRENT FILING DATE: 2002-02-28  
 12 <150> PRIOR APPLICATION NUMBER: FR 98 03814  
 13 <151> PRIOR FILING DATE: 1998-03-27  
 15 <160> NUMBER OF SEQ ID NOS: 136  
 17 <170> SOFTWARE: PatentIn Vers. 2.0  
 19 <210> SEQ ID NO: 1  
 20 <211> LENGTH: 1032  
 21 <212> TYPE: DNA  
 22 <213> ORGANISM: Klebsiella pneumoniae  
 24 <220> FEATURE:  
 25 <221> NAME/KEY: CDS  
 26 <222> LOCATION: (1)..(1032)  
 27 <223> OTHER INFORMATION: rP40  
 29 <400> SEQUENCE: 1  
 30 atg aaa gca att ttc gta ctg aat gcg gct ccg aaa gat aac acc tgg 48  
 31 Met Lys Ala Ile Phe Val Leu Asn Ala Ala Pro Lys Asp Asn Thr Trp  
 32 1 5 10 15  
 34 tat gca ggt ggt aaa ctg ggt tgg tcc cag tat cac gac acc ggt ttc 96  
 35 Tyr Ala Gly Gly Lys Leu Gly Trp Ser Gln Tyr His Asp Thr Gly Phe  
 36 20 25 30  
 38 tac ggt aac ggt ttc cag aac aac aac ggt ccg acc cgt aac gat cag 144  
 39 Tyr Gly Asn Gly Phe Gln Asn Asn Asn Gly Pro Thr Arg Asn Asp Gln  
 40 35 40 45  
 42 ctt ggt gct ggt gcg ttc ggt ggt tac cag gtt aac ccg tac ctc ggt 192  
 43 Leu Gly Ala Gly Ala Phe Gly Gly Tyr Gln Val Asn Pro Tyr Leu Gly  
 44 50 55 60  
 46 ttc gaa atg ggt tat gac tgg ctg ggc cgt atg gca tat aaa ggc agc 240  
 47 Phe Glu Met Gly Tyr Asp Trp Leu Gly Arg Met Ala Tyr Lys Gly Ser  
 48 65 70 75 80  
 50 gtt gac aac ggt gct ttc aaa gct cag ggc gtt cag ctg acc gct aaa 288  
 51 Val Asp Asn Gly Ala Phe Lys Ala Gln Gly Val Gln Leu Thr Ala Lys  
 52 85 90 95  
 54 ctg ggt tac ccg atc act gac gat ctg gac atc tac acc cgt ctg ggc 336  
 55 Leu Gly Tyr Pro Ile Thr Asp Asp Leu Asp Ile Tyr Thr Arg Leu Gly  
 56 100 105 110  
 58 ggc atg gtt tgg cgc gct gac tcc aaa ggc aac tac gct tct acc ggc 384  
 59 Gly Met Val Trp Arg Ala Asp Ser Lys Gly Asn Tyr Ala Ser Thr Gly  
 60 115 120 125  
 62 gtt tcc cgt agc gaa cac gac act ggc gtt tcc cca gta ttt gct ggc 432

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## RAW SEQUENCE LISTING

DATE: 04/03/2002

PATENT APPLICATION: US/09/647,309A

TIME: 11:11:01

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF3\04032002\I647309A.raw

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63 Val Ser Arg Ser Glu His Asp Thr Gly Val Ser Pro Val Phe Ala Gly
64      130      135      140
66 ggc gta gag tgg gct gtt act cgt gac atc gct acc cgt ctg gaa tac 480
67 Gly Val Glu Trp Ala Val Thr Arg Asp Ile Ala Thr Arg Leu Glu Tyr
68 145      150      155      160
70 cag tgg gtt aac aac atc ggc gac gcg ggc act gtg ggt acc cgt cct 528
71 Gln Trp Val Asn Asn Ile Gly Asp Ala Gly Thr Val Gly Thr Arg Pro
72      165      170      175
74 gat aac ggc atg ctg agc ctg ggc gtt tcc tac cgc ttc ggt cag gaa 576
75 Asp Asn Gly Met Leu Ser Leu Gly Val Ser Tyr Arg Phe Gly Gln Glu
76      180      185      190
78 gat gct gca ccg gtt gtt gct ccg gct ccg gct ccg gct ccg gaa gtg 624
79 Asp Ala Ala Pro Val Val Ala Pro Ala Pro Ala Pro Ala Pro Glu Val
80      195      200      205
82 gct acc aag cac ttc acc ctg aag tct gac gtt ctg ttc aac ttc aac 672
83 Ala Thr Lys His Phe Thr Leu Lys Ser Asp Val Leu Phe Asn Phe Asn
84      210      215      220
86 aaa gct acc ctg aaa ccg gaa ggt cag cag gct ctg gat cag ctg tac 720
87 Lys Ala Thr Leu Lys Pro Glu Gly Gln Gln Ala Leu Asp Gln Leu Tyr
88 225      230      235      240
90 act cag ctg agc aac atg gat ccg aaa gac ggt tcc gct gtt gtt ctg 768
91 Thr Gln Leu Ser Asn Met Asp Pro Lys Asp Gly Ser Ala Val Val Leu
92      245      250      255
94 ggc tac acc gac cgc atc ggt tcc gaa gct tac aac cag cag ctg tct 816
95 Gly Tyr Thr Asp Arg Ile Gly Ser Glu Ala Tyr Asn Gln Gln Leu Ser
96      260      265      270
98 gag aaa cgt gct cag tcc gtc gtt gac tac ctg gtt gct aaa ggc atc 864
99 Glu Lys Arg Ala Gln Ser Val Val Asp Tyr Leu Val Ala Lys Gly Ile
100      275      280      285
102 ccg gct ggc aaa atc tcc gct cgc ggc atg ggt gaa tcc aac ccg gtt 912
103 Pro Ala Gly Lys Ile Ser Ala Arg Gly Met Gly Glu Ser Asn Pro Val
104      290      295      300
106 act ggc aac acc tgt gac aac gtg aaa gct cgc gct gcc ctg atc gat 960
107 Thr Gly Asn Thr Cys Asp Asn Val Lys Ala Arg Ala Ala Leu Ile Asp
108 305      310      315      320
110 tgc ctg gct ccg gat cgt cgt gta gag atc gaa gtt aaa ggc tac aaa 1008
111 Cys Leu Ala Pro Asp Arg Arg Val Glu Ile Glu Val Lys Gly Tyr Lys
112      325      330      335
114 gaa gtt gta act cag cct cag gct 1032
115 Glu Val Val Thr Gln Pro Gln Ala
116      340
119 <210> SEQ ID NO: 2
120 <211> LENGTH: 344
121 <212> TYPE: PRT
122 <213> ORGANISM: Klebsiella pneumoniae
124 <400> SEQUENCE: 2
125 Met Lys Ala Ile Phe Val Leu Asn Ala Ala Pro Lys Asp Asn Thr Trp
126 1      5      10      15
128 Tyr Ala Gly Gly Lys Leu Gly Trp Ser Gln Tyr His Asp Thr Gly Phe

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## RAW SEQUENCE LISTING

DATE: 04/03/2002

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TIME: 11:11:01

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF3\04032002\I647309A.raw

```

129          20          25          30
131 Tyr Gly Asn Gly Phe Gln Asn Asn Asn Gly Pro Thr Arg Asn Asp Gln
132          35          40          45
134 Leu Gly Ala Gly Ala Phe Gly Gly Tyr Gln Val Asn Pro Tyr Leu Gly
135          50          55          60
137 Phe Glu Met Gly Tyr Asp Trp Leu Gly Arg Met Ala Tyr Lys Gly Ser
138 65          70          75          80
140 Val Asp Asn Gly Ala Phe Lys Ala Gln Gly Val Gln Leu Thr Ala Lys
141          85          90          95
143 Leu Gly Tyr Pro Ile Thr Asp Asp Leu Asp Ile Tyr Thr Arg Leu Gly
144          100          105          110
146 Gly Met Val Trp Arg Ala Asp Ser Lys Gly Asn Tyr Ala Ser Thr Gly
147          115          120          125
149 Val Ser Arg Ser Glu His Asp Thr Gly Val Ser Pro Val Phe Ala Gly
150          130          135          140
152 Gly Val Glu Trp Ala Val Thr Arg Asp Ile Ala Thr Arg Leu Glu Tyr
153 145          150          155          160
155 Gln Trp Val Asn Asn Ile Gly Asp Ala Gly Thr Val Gly Thr Arg Pro
156          165          170          175
158 Asp Asn Gly Met Leu Ser Leu Gly Val Ser Tyr Arg Phe Gly Gln Glu
159          180          185          190
161 Asp Ala Ala Pro Val Val Ala Pro Ala Pro Ala Pro Glu Val
162          195          200          205
164 Ala Thr Lys His Phe Thr Leu Lys Ser Asp Val Leu Phe Asn Phe Asn
165          210          215          220
167 Lys Ala Thr Leu Lys Pro Glu Gly Gln Gln Ala Leu Asp Gln Leu Tyr
168 225          230          235          240
170 Thr Gln Leu Ser Asn Met Asp Pro Lys Asp Gly Ser Ala Val Val Leu
171          245          250          255
173 Gly Tyr Thr Asp Arg Ile Gly Ser Glu Ala Tyr Asn Gln Gln Leu Ser
174          260          265          270
176 Glu Lys Arg Ala Gln Ser Val Val Asp Tyr Leu Val Ala Lys Gly Ile
177          275          280          285
179 Pro Ala Gly Lys Ile Ser Ala Arg Gly Met Gly Glu Ser Asn Pro Val
180          290          295          300
182 Thr Gly Asn Thr Cys Asp Asn Val Lys Ala Arg Ala Ala Leu Ile Asp
183 305          310          315          320
185 Cys Leu Ala Pro Asp Arg Arg Val Glu Ile Glu Val Lys Gly Tyr Lys
186          325          330          335
188 Glu Val Val Thr Gln Pro Gln Ala
189          340
192 <210> SEQ ID NO: 3
193 <211> LENGTH: 303
194 <212> TYPE: DNA
195 <213> ORGANISM: Respiratory Syncytial Virus (RSV)
197 <220> FEATURE:
198 <221> NAME/KEY: CDS
199 <222> LOCATION: (1)-(303)
201 <220> FEATURE:

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## RAW SEQUENCE LISTING

DATE: 04/03/2002

PATENT APPLICATION: US/09/647,309A

TIME: 11:11:01

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF3\04032002\I647309A.raw

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202 <223> OTHER INFORMATION: G2A
204 <400> SEQUENCE: 3
205 acc gtg aaa acc aaa aac acc acg acc acc cag acc cag ccg agc aaa 48
206 Thr Val Lys Thr Lys Asn Thr Thr Thr Gln Thr Gln Pro Ser Lys
207 1 5 10 15
209 ccg acc acc aaa cag cgt cag aac aaa ccg ccg aac aaa ccg aac aac 96
210 Pro Thr Thr Lys Gln Arg Gln Asn Lys Pro Pro Asn Lys Pro Asn Asn
211 20 25 30
213 gat ttc cat ttc gaa gtg ttc aac ttc gtg ccg tgc agc atc tgc agc 144
214 Asp Phe His Phe Glu Val Phe Asn Phe Val Pro Cys Ser Ile Cys Ser
215 35 40 45
217 aac aac ccg acc tgc tgg gcg atc tgc aaa cgt atc ccg aac aaa aaa 192
218 Asn Asn Pro Thr Cys Trp Ala Ile Cys Lys Arg Ile Pro Asn Lys Lys
219 50 55 60
221 ccg ggc aaa aaa acc acg acc aaa ccg acc aaa aaa ccg acc ttc aaa 240
222 Pro Gly Lys Lys Thr Thr Thr Lys Pro Thr Lys Lys Pro Thr Phe Lys
223 65 70 75 80
225 acc acc aaa aaa gat cat aaa ccg cag acc acc aaa ccg aaa gaa gtg 288
226 Thr Thr Lys Lys Asp His Lys Pro Gln Thr Thr Lys Pro Lys Glu Val
227 85 90 95
229 ccg acc acc aaa ccg 303
230 Pro Thr Thr Lys Pro
231 100
234 <210> SEQ ID NO: 4
235 <211> LENGTH: 101
236 <212> TYPE: PRT
237 <213> ORGANISM: Respiratory Syncytial Virus (RSV)
239 <400> SEQUENCE: 4
240 Thr Val Lys Thr Lys Asn Thr Thr Thr Thr Gln Thr Gln Pro Ser Lys
241 1 5 10 15
243 Pro Thr Thr Lys Gln Arg Gln Asn Lys Pro Pro Asn Lys Pro Asn Asn
244 20 25 30
246 Asp Phe His Phe Glu Val Phe Asn Phe Val Pro Cys Ser Ile Cys Ser
247 35 40 45
249 Asn Asn Pro Thr Cys Trp Ala Ile Cys Lys Arg Ile Pro Asn Lys Lys
250 50 55 60
252 Pro Gly Lys Lys Thr Thr Lys Pro Thr Lys Lys Pro Thr Phe Lys
253 65 70 75 80
255 Thr Thr Lys Lys Asp His Lys Pro Gln Thr Thr Lys Pro Lys Glu Val
256 85 90 95
258 Pro Thr Thr Lys Pro
259 100
262 <210> SEQ ID NO: 5
263 <211> LENGTH: 303
264 <212> TYPE: DNA
265 <213> ORGANISM: Respiratory Syncytial Virus (RSV)
267 <220> FEATURE:
268 <221> NAME/KEY: CDS
269 <222> LOCATION: (1)..(303)

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## RAW SEQUENCE LISTING

DATE: 04/03/2002

PATENT APPLICATION: US/09/647,309A

TIME: 11:11:01

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF3\04032002\I647309A.raw

271 &lt;220&gt; FEATURE:

272 &lt;223&gt; OTHER INFORMATION: G2B

274 &lt;400&gt; SEQUENCE: 5

275 acc gcg cag acc aaa ggc cgt atc acc acc agc acc cag acc aac aaa 48

276 Thr Ala Gln Thr Lys Gly Arg Ile Thr Thr Ser Thr Gln Thr Asn Lys

277 1 5 10 15

279 ccg agc acc aaa agc cgt agc aaa aac ccg ccg aaa aaa ccg aaa gat 96

280 Pro Ser Thr Lys Ser Arg Ser Lys Asn Pro Pro Lys Lys Pro Lys Asp

281 20 25 30

283 gat tac cac ttc gaa gtg ttc aac ttc gtg ccc tgc agc atc tgc ggc 144

284 Asp Tyr His Phe Glu Val Phe Asn Phe Val Pro Cys Ser Ile Cys Gly

285 35 40 45

287 aac aac cag ctg tgc aaa agc atc tgc aaa acc atc ccg agc aac aaa 192

288 Asn Asn Gln Leu Cys Lys Ser Ile Cys Lys Thr Ile Pro Ser Asn Lys

289 50 55 60

291 ccg aaa aag aaa ccg acc atc aaa ccg acc aac aaa ccg acc acc aaa 240

292 Pro Lys Lys Lys Pro Thr Ile Lys Pro Thr Asn Lys Pro Thr Thr Lys

293 65 70 75 80

295 acc acc aac aaa cgt gat ccg aaa acc ccg gcg aaa atg ccg aag aag 288

296 Thr Thr Asn Lys Arg Asp Pro Lys Thr Pro Ala Lys Met Pro Lys Lys

297 85 90 95

299 gaa atc atc acc aac 303

300 Glu Ile Ile Thr Asn

301 100

304 &lt;210&gt; SEQ ID NO: 6

305 &lt;211&gt; LENGTH: 101

306 &lt;212&gt; TYPE: PRT

307 &lt;213&gt; ORGANISM: Respiratory Syncytial Virus (RSV)

309 &lt;400&gt; SEQUENCE: 6

310 Thr Ala Gln Thr Lys Gly Arg Ile Thr Thr Ser Thr Gln Thr Asn Lys

311 1 5 10 15

313 Pro Ser Thr Lys Ser Arg Ser Lys Asn Pro Pro Lys Lys Pro Lys Asp

314 20 25 30

316 Asp Tyr His Phe Glu Val Phe Asn Phe Val Pro Cys Ser Ile Cys Gly

317 35 40 45

319 Asn Asn Gln Leu Cys Lys Ser Ile Cys Lys Thr Ile Pro Ser Asn Lys

320 50 55 60

322 Pro Lys Lys Lys Pro Thr Ile Lys Pro Thr Asn Lys Pro Thr Thr Lys

323 65 70 75 80

325 Thr Thr Asn Lys Arg Asp Pro Lys Thr Pro Ala Lys Met Pro Lys Lys

326 85 90 95

328 Glu Ile Ile Thr Asn

329 100

332 &lt;210&gt; SEQ ID NO: 7

333 &lt;211&gt; LENGTH: 303

334 &lt;212&gt; TYPE: DNA

335 &lt;213&gt; ORGANISM: Respiratory Syncytial Virus (RSV)

337 &lt;220&gt; FEATURE:

338 &lt;221&gt; NAME/KEY: CDS

Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

## VERIFICATION SUMMARY

DATE: 04/03/2002

PATENT APPLICATION: US/09/647,309A

TIME: 11:11:02

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF3\04032002\I647309A.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:604 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:19  
L:604 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:19  
L:604 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19  
L:621 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:20  
L:621 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:20  
L:621 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:638 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:21  
L:638 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:21  
L:638 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21  
L:655 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:22  
L:655 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:22  
L:655 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22  
L:882 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:33  
L:882 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:33  
L:882 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33  
L:902 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:34  
L:902 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:34  
L:902 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34  
L:922 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:35  
L:922 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:35  
L:922 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35  
L:942 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:36  
L:942 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:36  
L:942 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36  
L:3222 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:129  
L:3222 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:129  
L:3222 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:129  
L:3242 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:130  
L:3242 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:130  
L:3242 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:130  
L:3321 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:135  
L:3321 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:135  
L:3321 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:135  
L:3338 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:136  
L:3338 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:136  
L:3338 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:136